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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/308,140	12/30/1999	LOUISE JANE BYASS	LEVER-620X(F	5766

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PATENT DEPARTMENT
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EXAMINER
ROBINSON, HOPE A

ART UNIT	PAPER NUMBER
1653	18

DATE MAILED: 03/28/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.	Applicant(s)
09/308,140	Byass et al.
Examiner	**Art Unit**
Hope Robinson	1653

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *Jan 11, 2002* .

2a) ☐ This action is **FINAL.** 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above, claim(s) *5, 6, 8-10, 16, and 17* is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-4, 7, 11-15, and 18-20* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

9) ☒ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

a) ☐ All b) ☐ Some* c) ☒ None of:

1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

15) ☐ Notice of References Cited (PTO-892)
16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
17) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 17
18) ☐ Interview Summary (PTO-413) Paper No(s). _____
19) ☐ Notice of Informal Patent Application (PTO-152)
20) ☐ Other:

DETAILED ACTION

1. Applicant's election with traverse of Invention I (Claims 1-4, 7, 11-15 and 18-20) in Paper No. 16 is acknowledged. Applicant also elected Invention F. The traversal is on the grounds that it is unnecessary to restrict Inventions A-F as the inventions are not unrelated, as Example III of the specification discloses that they are capable of use together. It appears that applicant's traversal is not directed to the election of Invention I but the election of Invention F as no traversal arguments were presented for that, thus is deemed to be an election without traverse. Regarding the traversal of Invention F, the sequences are deemed patentably distinct as they are physically and structurally different. The MPEP in chapter 800 states that restriction requirement is proper if the invention is deemed to be independent or distinct. Thus, the restriction requirement is proper and is final.

2. It is noted that Preliminary Amendment A, Amendment B and Amendment C have been filed in this application. None of the present amendments instructed the Patent Office to amend claim 1, yet there are two versions of claim 1 in the present application (see Amendment B, filed June 15, 2001). It is noted also that Amendment B was not entered by the office, thus claim 1 as originally presented will be the only version of the claim examined. In addition, Amendment C presented a clean copy of all the pending claims in the present application, however, claims 17-20 were not included.

Abstract

3. The abstract is objected to because this application does not contain an abstract of the disclosure as required by 37 CFR 1.72(b). An abstract on a separate sheet is required.

Specification

4. The specification is objected to because of the following informalities:

The specification is objected to because on page 4-5 a sequence is disclosed without the corresponding sequence identifier.

Compliance with the sequence rules is required.

Priority

5. It is noted that applicant has claimed priority to application numbers EPO 96308362.1, filed November 19, 1996 and PCT/EP97/06181, filed November 6, 1997, however, certified copies of the priority documents have not been received.

Claim Objection

6. Claim 2 is objected to because the claims recite sequences without the corresponding sequence identifier following it, for example, (A) Leu-Pro-Asn-Leu-Phe-Gly-Lys (SEQ ID NO: 1).

In addition, applicant is advised that should claims 14 and 20 be found allowable, claims 14 and 20 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Claim Rejections - 35 U.S.C. § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

7. Claim 15 is rejected under 35 U.S. C. 101 because the claimed recitation of use, without setting forth any steps involved in the method/process, results in an improper definition of a method/process. Note that "A use" is not a statutory class of invention.

8. Claims 1-4, 11-15 and 18-20 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The claims are drawn to a polypeptide, which reads on a product of nature. Further, the polypeptide as claimed, has an amino acid sequence duplicative of that of the protein or a cellular precursor thereof and possesses the biological and functional properties of the naturally occurring polypeptide and therefore does not constitute patentable subject matter on the basis of absence of qualifiers. The claims should be amended to indicate the hand of the inventor, for example, by insertion of "isolated or purified". See MPEP 2105.

Claim Rejections - 35 U.S.C. § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims 1-3, 7, 11-15 and 18-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 is indefinite for the recitation of "polypeptide ... which can be obtained form carrots", because it implies that the polypeptide is obtained from other sources not recited in the claim. It is suggested that applicant amend the claim to recite "polypeptide ...obtained form carrots".

Claim 2 is indefinite because the claim recites "X" in the sequence and does not define X, for example..."wherein X is any amino acid". The dependent claims are also included in this rejection.

Claim 7, 12, 14, 19 and 20 are all missing the article "A" in the beginning of the claims.

Claim 11 is indefinite because the claim depends from a non-elected claim. The claim is also indefinite because of the recitation of "claim2" instead of "claim 2". The claim is further indefinite as the claim represents an improper multiple dependent claim.

Claims 14 and 20 appear to be identical as the claims both depend from claim 2 with the same limitations.

Claim 15 is indefinite because the claims provide for the use of polypeptide (for increasing frost tolerance), but, since the claim does not set forth any steps involved in the method or process, it is unclear what method, process, or therapy the claim is intended to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claim Rejections - 35 U.S.C. § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless --
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Griffith (WO 92/22581, December 23, 1992).

The claim is directed to polypeptides having antifreeze activity with an apparent molecular weight of 36 kDa on SDS-PAGE and isoforms/derivatives thereof which still possess antifreeze activity. Griffith teach the isolation of a number of antifreeze polypeptides derived from intracellular spaces of plant cells, one of them having a molecular weight of 36 kDa and the amino acid sequence shown in Table 1 (see pages 23 and 31 of the reference). The polypeptides are described to be useful for increasing survival and productivity in overwintering crops and in production of frozen foods and cryogenic storage of biological tissue (see page 30 and the claims of the reference). Thus, the reference anticipates the claimed invention.

Conclusion

11. No claims are allowable.

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Hope A. Robinson whose telephone number is (703)308-6231. The Examiner can normally be reached on Monday - Friday from 9:00 A.M. to 5:30 P.M. (EST).

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor Christopher S.F. Low, can be reached at (703)308-2932.

Any inquiries of a general nature relating to this application should be directed to the Group Receptionist whose telephone number is (703)308-0196.

Papers related to this application may be submitted by facsimile transmission. The official fax phone number for Technology Center 1600 is (703) 308-2742. Please affix the Examiner's name on a cover sheet attached to your communication should you choose to fax your response. The faxing of such papers must conform with the notice published in the Official Gazette, 1096 OG (November 15, 1989).

KAREN COCHRANE CARLSON, PH.D
PRIMARY EXAMINER

Hope A. Robinson, MS

Patent Examiner